



SEQUENCE LISTING

<110> Emil M. Orozco, Jr.
Zude Weng
Wesley B. Bruce
Rebecca E. Cahoon
Yong Tao

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 Phe Val Ala Gly Pro Ala Val Met Ala Ala Ala Ser Ile Ala Val Gly
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Tyr Thr Met Asn Leu Arg Phe Ile Ala Ala Asp Thr Leu Gln Lys Leu
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Thr Leu Val Met Gly Ile Pro Leu Leu Lys Gly Met Tyr Gly Asp Phe
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Xaa Xaa Thr Pro Asp Gln Cys Ser Gly Ile Asn Arg Phe Val Ala Leu
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Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ser Thr Asn Asp Pro
 50 55 60

Phe Ala Met Asn Leu Arg Phe Leu Ala Val Asp Thr Leu Gln Lys Val
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Ala Val Leu Ala Leu Leu Ala Leu Xaa Ser Xaa Ala Ala Ser Ser Xaa
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 35 40 45
 Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ser Thr Asn Asp Pro
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 Phe Ala Met Asn Leu Arg Phe Leu Ala Ala Asp Thr Leu Gln Lys Val
 65 70 75 80
 Ala Val Leu Ala Leu Leu Ala Leu Ala Ser Arg Gly Leu Ser Ser Pro
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 Gly Ala Ser Ser Ala Gly Thr Leu Met Val Gln Val Val Val Leu Gln
 130 135 140
 Cys Ile Ile Trp Tyr Thr Leu Met Leu Phe Leu Phe Glu Tyr Arg Ala
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 165 170 175
 Ile Val Ser Phe Arg Val Asp Ser Asp Val Val Ser Leu Ala Arg Gly
 180 185 190
 Asp Val Glu Leu Glu Ala Glu Pro Asp Gly Val Ala Gly Ala Gly Ala
 195 200 205
 Val Ser Ser Arg Gly Gly Asp Ala Gly Arg Val Arg Val Thr Val Arg
 210 215 220
 Lys Ser Thr Ser Ser Arg Ser Glu Ala Ala Cys Ser His Ser His Ser
 225 230 235 240
 Gln Thr Met Gln Pro Arg Val Ser Asn Leu Ser Gly Val Glu Ile Tyr
 245 250 255

Ser Leu Gln Ser Ser Arg Asn Pro Thr Pro Arg Gly Ser Ser Phe Asn
 260 265 270
 His Ala Asp Phe Phe Asn Ile Val Gly Ala Ala Ala Lys Gly Gly Gly
 275 280 285
 Gly Ala Ala Gly Asp Glu Glu Lys Gly Ala Cys Gly Gly Gly Gly
 290 295 300
 Gly His Ser Pro Gln Pro Gln Ala Val Ala Val Pro Ala Lys Arg Lys
 305 310 315 320
 Asp Leu His Met Leu Val Trp Ser Ser Ser Ala Ser Pro Val Ser Glu
 325 330 335
 Arg Ala Ala Val His Val Phe Gly Ala Gly Gly Ala Asp His Ala Asp
 340 345 350
 Val Leu Ala Lys Gly Ala Gln Ala Tyr Asp Glu Tyr Gly Arg Asp Asp
 355 360 365
 Tyr Ser Ser Arg Thr Lys Asn Gly Ser Gly Gly Ala Asp Lys Gly Gly
 370 375 380
 Pro Thr Leu Ser Lys Leu Gly Ser Asn Ser Thr Ala Gln Leu Tyr Pro
 385 390 395 400
 Lys Asp Asp Gly Glu Gly Arg Ala Ala Ala Val Ala Met Pro Pro Ala
 405 410 415
 Ser Val Met Thr Arg Leu Ile Leu Ile Met Val Trp Arg Lys Leu Ile
 420 425 430
 Arg Asn Pro Asn Thr Tyr Ser Ser Leu Ile Gly Val Val Trp Ser Leu
 435 440 445
 Val Ser Tyr Arg Trp Gly Ile Glu Met Pro Ala Ile Ile Ala Arg Ser
 450 455 460
 Ile Ser Ile Leu Ser Asp Ala Gly Leu Gly Met Ala Met Phe Ser Leu
 465 470 475 480
 Gly Leu Phe Met Ala Leu Gln Pro Arg Ile Ile Ala Cys Gly Asn Lys
 485 490 495
 Leu Ala Ala Ile Ala Met Gly Val Arg Phe Val Ala Gly Pro Ala Val
 500 505 510
 Met Ala Ala Ala Ser Ile Ala Val Gly Leu Arg Gly Val Leu Leu His
 515 520 525
 Ile Ala Ile Val Gln Ala Ala Leu Pro Gln Gly Ile Val Pro Phe Val
 530 535 540
 Phe Ala Lys Glu Tyr Gly Val His Pro Asp Ile Leu Ser Thr Ala Tyr
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 Gly Pro Ile Thr Ser His Gly Phe Ile Thr Cys His Ser
 565 570

<210> 15
<211> 543
<212> DNA
<213> Oryza sativa

<220>
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<222> (42)
<223> n=a,c,g or t

<220>
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<222> (374)
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<222> (415)
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<222> (431)
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<222> (443)
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<222> (463)
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<222> (475)
<223> n=a,c,g or t

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<221> unsure
<222> (482)
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<222> (511)
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<222> (519)

<223> n=a,c,g or t

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<221> unsure

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<222> (530)

<223> n=a,c,g or t

<220>

<221> unsure

<222> (535)

<223> n=a,c,g or t

<220>

<221> unsure

<222> (543)

<223> n=a,c,g or t

<400> 15

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 tgtacgcccag cgttctcgcc gtcgtgtggg cgtcatcgc gtacagggtgg cacctgagct 180
 tgccggggat cgtgacgggg tcgctgcagg tgatgtccag gactggcacg gggatgtcca 240
 tgttcagcat ggggttgttc atggggcagc aggagagggt gatacggtgc ggggcggggc 300
 tgacggcgct gggatggcg ctgcgggtcg tcgcccgtcc gctcgccacg ctcgtcgccg 360
 ccgcccgcct cggncctccgc ggacgtcc tgcacctcgc catcatacag gncgnactgc 420
 tcaatcgatt nttcttcgtt ttncaaagga gtatggctta ttncgatgac tcagnacggc 480
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<210> 16

<211> 110

<212> PRT

<213> Oryza sativa

<220>

<221> UNSURE

<222> (108)..(109)

<223> Xaa = ANY AMINO ACID

<400> 16

Val Gly Leu Lys Leu Ala Arg Asn Pro Asn Val Tyr Ala Ser Val Leu
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Gly Val Val Trp Ala Cys Ile Ala Tyr Arg Trp His Leu Ser Leu Pro
 20 25 30

Gly Ile Val Thr Gly Ser Leu Gln Val Met Ser Arg Thr Gly Thr Gly
 35 40 45

Met Ser Met Phe Ser Met Gly Leu Phe Met Gly Gln Gln Glu Arg Val
 50 55 60

Ile Ala Cys Gly Ala Gly Leu Thr Ala Leu Gly Met Ala Leu Arg Phe
 65 70 75 80

Val Ala Gly Pro Leu Ala Thr Leu Val Gly Ala Ala Ala Leu Gly Leu
 85 90 95

Arg Gly Asp Val Leu His Leu Ala Ile Ile Gln Xaa Xaa Leu
 100 105 110

<210> 17

<211> 330

<212> DNA

<213> Oryza sativa

<400> 17

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 acacgggtat ggcggcggtg gtggcgctgt acgtggcgat gttcctggcg tacgggtcgg 180
 tgcgggtggc gggcatcttc acgcccggacc agtgctccgg catcaaccgc ttctcgcca 240
 tcttcggcgtt ggcgctcctg tccttccact tcatctccac caacgaccgg tacgccccatga 300
 acctccgctt cctggcggcg ggacacgctg 330

<210> 18

<211> 74

<212> PRT

<213> Oryza sativa

<400> 18

Met Ile Ser Gly His Asp Phe Tyr Thr Val Met Ala Ala Val Val Pro
 1 5 10 15

Leu Tyr Val Ala Met Phe Leu Ala Tyr Gly Ser Val Arg Trp Trp Gly
 20 25 30

Ile Phe Thr Pro Asp Gln Cys Ser Gly Ile Asn Arg Phe Val Ala Ile
 35 40 45

Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ser Thr Asn Asp Pro
 50 55 60

Tyr Ala Met Asn Leu Arg Phe Leu Ala Ala
 65 70

<210> 19

<211> 2162

<212> DNA

<213> Oryza sativa

<400> 19

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 acacgggtat ggcggcggtg gtggcgctgt acgtggcgat gttcctggcg tacgggtcgg 180
 tgcgggtggc gggcatcttc acgcccggacc agtgctccgg catcaaccgc ttctcgcca 240
 tcttcggcgtt ggcgctcctg tccttccact tcatctccac caacgaccgg tacgccccatga 300
 acctccgctt cctggcggcg gacacgctgc agaagctgtc cgtcctggcg gggctcgccg 360
 cgtggtcgcg cctccctcg cggaccggcg cgccggcgat ggactggtcc atcacgctct 420
 tctccctctc cacgctgccc aacacgctcg tcatggggat cccgctgctg atcgccatgt 480
 acggggccata ctccggctcg ctcatggtcc agatcgctgt gctccagtgc atcatctgg 540
 acacgctgtat gctcttcctc ttcgagttcc ggcggcgcgc gatgctgtat gccgaccagt 600
 tcccgacac ggcggcgtcc atcgtgtccc tgcacgtcga cccggacgtg gtgtcgctgg 660
 agggcggcca cgcggagacg gaggccgagg tggccggcga cggccggctg cacgtcaccg 720
 tgcggccggtc ctcgggtgtcg cggccggctcg tgctggtcac gccgcggccg tcaaacctga 780
 cgggagcggaa gatctactcg cttagctcg cgcggaaaccc aacccggcg ggctccaact 840

tcaaccacgc cgacttcttc gccatggtcg gcggcgggccc accgcccccg acgcccgcgtg 900
 cggtgcgcgg ctcgagcttc ggccgcctcc agcttactc gctgcaatcg tcgcggggcc 960
 caaccccgag gcagtccaaac ttgcacgagc actcggcacg gccgcccggaa ccaccggcaa 1020
 cgaccacggg ggcactcaac cacgatgcca aggagctcca catgttcgtg tggagctcga 1080
 gcgcgtctcc cgtctcagaa gtcagcggcc tgcctgtgtt cagtggcggc ggcggcggcc 1140
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 acaacggcgc aggcaaagag cacgaggagt acggcgcagt ggcattgggt ggcggcggcc 1260
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 accccgaagt cgtcgcacgc gacggaccga acgcccggcgg cggcgcgcgc ggcgcggggc 1440
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 agctcatccg caaccccaac acttactcca gcctcctcg cctgcctgg tccctcgtcg 1560
 cttccggat tgttcatggc gtcgcagccc agcatcatcg cgtgtggcaa atcagccgc 1620
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 gccatcggac tccgcgggac gtcgcctgcac gtcgcattg ttcaaggcgcg ttcaggcgc 1740
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 gcggtaattt ttggcatgct aatagcttt ccaatcacat tgctgtacta catccttctt 1860
 ggactatgt caagaaagct tatggacgct ctcacataaa acggaagaaa tgggggcaaa 1920
 gagagagaaaa aaaaagcgt cctgtccatc tcaaacagcgt tatgcttata tttatagcct 1980
 gttgtcggac attgcccattg atgacaagac aacgaagttt ttacagagct atatatctct 2040
 gcgacattt gtttgcggc aacgacagaa tgtactcaaa tataaccgtt attagatatg 2100
 tgttctgtta aagatctcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2160
 aaaaaaaaaa 2162

<210> 20

<211> 589

<212> PRT

<213> Oryza sativa

<400> 20

Met	Ile	Ser	Gly	His	Asp	Phe	Tyr	Thr	Val	Met	Ala	Ala	Val	Val	Pro
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Leu	Tyr	Val	Ala	Met	Phe	Leu	Ala	Tyr	Gly	Ser	Val	Arg	Trp	Trp	Gly
				20				25				30			

Ile	Phe	Thr	Pro	Asp	Gln	Cys	Ser	Gly	Ile	Asn	Arg	Phe	Val	Ala	Ile
					35			40			45				

Phe	Ala	Val	Pro	Leu	Leu	Ser	Phe	His	Ile	Ser	Thr	Asn	Asp	Pro
				50				55			60			

Tyr	Ala	Met	Asn	Leu	Arg	Phe	Leu	Ala	Ala	Asp	Thr	Leu	Gln	Lys	Leu
				65				70			75		80		

Leu	Val	Leu	Ala	Gly	Leu	Ala	Ala	Trp	Ser	Arg	Leu	Pro	Ser	Arg	Thr
					85				90			95			

Gly	Ala	Pro	Arg	Leu	Asp	Trp	Ser	Ile	Thr	Leu	Phe	Ser	Leu	Ser	Thr
					100				105			110			

Leu	Pro	Asn	Thr	Leu	Val	Met	Gly	Ile	Pro	Leu	Leu	Ile	Ala	Met	Tyr
					115				120			125			

Gly	Pro	Tyr	Ser	Gly	Ser	Leu	Met	Val	Gln	Ile	Val	Val	Leu	Gln	Cys
					130			135			140				

Ile	Ile	Trp	Tyr	Thr	Leu	Met	Leu	Phe	Leu	Phe	Glu	Phe	Arg	Ala	Ala
					145			150			155			160	

Arg	Met	Leu	Ile	Ala	Asp	Gln	Phe	Pro	Asp	Thr	Ala	Ala	Ser	Ile	Val
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

165

170

175

Ser Leu His Val Asp Pro Asp Val Val Ser Leu Glu Gly Gly His Ala
 180 185 190

Glu Thr Glu Ala Glu Val Ala Ala Asp Gly Arg Leu His Val Thr Val
 195 200 205

Arg Arg Ser Ser Val Ser Arg Arg Ser Leu Leu Val Thr Pro Arg Pro
 210 215 220

Ser Asn Leu Thr Gly Ala Glu Ile Tyr Ser Leu Ser Ser Ser Arg Asn
 225 230 235 240

Pro Thr Pro Arg Gly Ser Asn Phe Asn His Ala Asp Phe Phe Ala Met
 245 250 255

Val Gly Gly Pro Pro Pro Pro Thr Pro Ala Ala Val Arg Gly Ser
 260 265 270

Ser Phe Gly Ala Ser Glu Leu Tyr Ser Leu Gln Ser Ser Arg Gly Pro
 275 280 285

Thr Pro Arg Gln Ser Asn Phe Asp Glu His Ser Ala Arg Pro Pro Lys
 290 295 300

Pro Pro Ala Thr Thr Gly Ala Leu Asn His Asp Ala Lys Glu Leu
 305 310 315 320

His Met Phe Val Trp Ser Ser Ser Ala Ser Pro Val Ser Glu Val Ser
 325 330 335

Gly Leu Pro Val Phe Ser Gly Gly Gly Gly Gly Ala Leu Asp Val
 340 345 350

Gly Ala Lys Glu Ile His Met Val Ile Pro Ala Asp Leu Pro Gln Asn
 355 360 365

Asn Gly Ser Gly Lys Glu His Glu Glu Tyr Gly Ala Val Ala Leu Gly
 370 375 380

Gly Gly Gly Gly Glu Asn Phe Ser Phe Gly Gly Gly Lys Thr Val
 385 390 395 400

Asp Gly Ala Glu Ala Val Asp Glu Glu Ala Ala Leu Pro Asp Gly Leu
 405 410 415

Thr Lys Met Gly Ser Ser Ser Thr Ala Glu Leu His Pro Lys Val Val
 420 425 430

Asp Val Asp Gly Pro Asn Ala Gly Gly Ala Ala Gly Ala Gly Gln
 435 440 445

Tyr Gln Met Pro Pro Ala Ser Val Met Thr Arg Leu Ile Leu Ile Met
 450 455 460

Val Trp Arg Lys Leu Ile Arg Asn Pro Asn Thr Tyr Ser Ser Leu Leu
 465 470 475 480

Gly Leu Ala Trp Ser Leu Val Ala Phe Arg Leu Phe Met Ala Leu Gln
 485 490 495

Pro Ser Ile Ile Ala Cys Gly Lys Ser Ala Ala Val Val Ser Met Ala
500 505 510

Val Arg Phe Leu Ala Gly Pro Ala Val Met Ala Ala Ala Ser Ile Ala
515 520 525

Ile Gly Leu Arg Gly Thr Leu Leu His Val Ala Ile Val Gln Ala Ala
530 535 540

Leu Pro Gln Gly Ile Val Pro Phe Val Phe Ala Lys Glu Tyr Asn Val
545 550 555 560

His Pro Ala Ile Leu Ser Thr Ala Val Ile Phe Gly Met Leu Ile Ala
565 570 575

Leu Pro Ile Thr Leu Leu Tyr Tyr Ile Leu Leu Gly Leu
580 585

<210> 21
<211> 1618
<212> DNA
<213> Glycine max

<210> 22
<211> 443
<212> PRT
<213> Glycine max

<400> 22
Ile Ser Glu Gln Phe Pro Asp Thr Ala Gly Thr Ile Val Ser Ile His
1 5 10 15

Val Asp Ser Asp Val Met Ser Leu Asp Gly Arg Gln His Pro Leu Glu
 20 25 30

Thr Asp Ala Gln Ile Lys Glu Asp Gly Lys Leu His Val Thr Val Arg
 35 40 45

Lys Ser Asn Ala Ser Arg Ser Asp Ile Phe Ser Arg Arg Ser Gln Gly
 50 55 60

Phe Ser Ser Thr Thr Pro Arg Pro Ser Asn Leu Thr Asn Ala Glu Ile
 65 70 75 80

Tyr Ser Leu Gln Ser Ser Arg Asn Pro Thr Pro Arg Gly Ser Ser Phe
 85 90 95

Asn His Thr Asp Phe Tyr Ser Met Met Ala Ala Gly Arg Asn Ser Asn
 100 105 110

Phe Gly Ala Asn Asp Val Tyr Gly Leu Ser Ala Ser Arg Gly Pro Thr
 115 120 125

Pro Arg Pro Ser Asn Tyr Asp Glu Asp Ala Ser Asn Asn Asn Gly
 130 135 140

Lys Pro Arg Tyr His Tyr Pro Ala Ala Gly Thr Gly Thr Gly Thr Gly
 145 150 155 160

Thr Gly Thr Gly Thr Gly His Tyr Pro Ala Pro Asn Pro Gly
 165 170 175

Met Phe Ser Pro Thr Ala Ser Lys Asn Val Ala Lys Pro Asp Asp
 180 185 190

Pro Asn Lys Asp Leu His Met Phe Val Trp Ser Ser Ala Ser Pro
 195 200 205

Val Ser Asp Val Phe Gly Gly His Glu Tyr Asp His Lys Glu Leu
 210 215 220

Lys Leu Thr Val Ser Pro Gly Lys Val Glu Gly Asn Ile Asn Arg Asp
 225 230 235 240

Thr Gln Glu Glu Tyr Gln Pro Glu Lys Asp Glu Phe Ser Phe Gly Asn
 245 250 255

Arg Gly Ile Glu Asp Glu His Glu Gly Glu Lys Val Gly Asn Gly Asn
 260 265 270

Pro Lys Thr Met Pro Pro Ala Ser Val Met Thr Arg Leu Ile Leu Ile
 275 280 285

Met Val Trp Arg Lys Leu Ile Arg Asn Pro Asn Thr Tyr Ser Ser Leu
 290 295 300

Ile Gly Leu Thr Trp Ser Leu Ile Ser Phe Arg Trp Asn Val Lys Met
 305 310 315 320

Pro Ala Ile Ile Ala Lys Ser Ile Ser Ile Leu Ser Asp Ala Gly Leu
 325 330 335

Gly Met Ala Met Phe Ser Leu Gly Leu Phe Met Ala Leu Gln Pro Arg
 340 345 350

Ile Ile Ala Cys Gly Asn Ser Thr Ala Ala Phe Ser Met Ala Val Arg
 355 360 365

Phe Leu Thr Gly Pro Ala Val Met Ala Ala Ala Ser Ile Ala Val Gly
 370 375 380

Leu Lys Gly Val Leu Leu His Val Ala Ile Val Gln Ala Ala Leu Pro
 385 390 395 400

Gln Gly Ile Val Pro Phe Val Phe Ala Lys Glu Tyr Asn Val His Pro
 405 410 415

Asp Ile Leu Ser Thr Gly Val Ile Phe Gly Met Leu Ile Ala Leu Pro
 420 425 430

Ile Thr Leu Val Tyr Tyr Ile Leu Leu Gly Leu
 435 440

<210> 23

<211> 531

<212> DNA

<213> Glycine max

<220>

<221> unsure

<222> (530)

<223> n=a,c,g or t

<400> 23

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 aaattttcca attagcacta gtagtacagt acaaaaaact agaagagcaa ccaaaatttt 180
 ccaattgaaa aagaaataac aacgagaaca aaatcttatac gtgagatcga ataactgaaa 240
 aaaaaaggaaa gaagaacaaa aaatgataac gtggaaagac ctatacacgg tcctgaccgc 300
 agtggtccct ctctacgtgg cgatgatcct ggcgtacggc tcggtccggt ggtggaaaga 360
 tcctctcacc ggaccagtgc tccggcataa accgcttcgt ggcgatcttc gccgtgccgc 420
 tcctctcattt ccacttcattc tccaccaaca acccctacgc catgaacttc cgttcatcc 480
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<210> 24

<211> 90

<212> PRT

<213> Glycine max

<220>

<221> UNSURE

<222> (33)

<223> Xaa = ANY AMINO ACID

<220>

<221> UNSURE

<222> (78)

<223> Xaa = ANY AMINO ACID

<400> 24

Met Ile Thr Trp Lys Asp Leu Tyr Thr Val Leu Thr Ala Val Val Pro
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Leu Tyr Val Ala Met Ile Leu Ala Tyr Gly Ser Val Arg Trp Trp Lys
20 25 30

Xaa Ile Phe Ser Pro Asp Gln Cys Ser Gly Ile Asn Arg Phe Val Ala
35 40 45

Ile Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ser Thr Asn Asn
50 55 60

Pro Tyr Ala Met Asn Phe Arg Phe Ile Arg Arg Arg Thr Xaa Thr Ser
65 70 75 80

Lys Lys Ile Ile Met Leu Phe Ala Leu Ala
85 90

<210> 25

<211> 2101

<212> DNA

<213> Glycine max

<400> 25

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aaccaaaaatt ttccaaattttag cactagttagt acagtacaaa aaactagaag agcaacccaa 180
attttccaat tgaaaaagaa ataacaacga gaacaaaatc ttatcgtagt atcgaataac 240
tgaaaaaaaaa gggaaagaaga aaaaaaaaaatg ataacgttga aagacctata cacggccctg 300
accgcagtgg tccctctcta cgtggcgatg atccctggcgt acggctcggt ccgggtgg 360
aagatcttctt caccggacca gtgctccggc ataaaccgct tcgtggcgat cttccggctg 420
ccgctccctt cttccactt catctccacc aacaacccct acgccatgaa ctccgccttc 480
atcgccgccc acaccctcca gaagatcatc atgctttcg cccttgcctt ctggaccaac 540
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aataccttag tcatggaaat tccactctta atcgccatgt acggcgacta ctccggctcg 660
ctcatggttt cggcgtagt ctttcgtgc atcatatggt acacccgtt gctcttctta 720
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atcggtgtgt tttaaagtgcgatccctccgacgtc gtttcgtcg acggggaggaa cttcttggag 840
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gaacaagttt gggaaagaaaa agaagggttc aacaatgggc ttaacaagtt gggctcaagc 1620
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cttggaaatgg ctatgttcag ctttaggtgac tgggtcgaaa tccatttccttcc aaattcatac 1920
tctcgcgaaa taatttcatt cttttatccca aaaacaattt cgcttccctc tttccatag 1980
atcatttattt tattggctcc aattgttagt gtaaatgtgg atttccttat actaagaaaa 2040
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a 2101

<210> 26

<211> 540

<212> PRT

<213> Glycine max

<400> 26

Met	Ile	Thr	Trp	Lys	Asp	Leu	Tyr	Thr	Val	Leu	Thr	Ala	Val	Val	Pro		
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Leu Tyr Val Ala Met Ile Leu Ala Tyr Gly Ser Val Arg Trp Trp Lys																	
20				25				30									
Ile Phe Ser Pro Asp Gln Cys Ser Gly Ile Asn Arg Phe Val Ala Ile																	
35				40				45									
Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ser Thr Asn Asn Pro																	
50				55				60									
Tyr Ala Met Asn Phe Arg Phe Ile Ala Ala Asp Thr Leu Gln Lys Ile																	
65				70				75								80	
Ile Met Leu Phe Ala Leu Ala Ile Trp Thr Asn Leu Thr Lys Thr Gly																	
85				90				95									
Ser Leu Glu Trp Met Ile Thr Ile Phe Ser Leu Ser Thr Leu Pro Asn																	
100				105				110									
Thr Leu Val Met Gly Ile Pro Leu Leu Ile Ala Met Tyr Gly Asp Tyr																	
115				120				125									
Ser Gly Ser Leu Met Val Gln Val Val Val Leu Gln Cys Ile Ile Trp																	
130				135				140									
Tyr Thr Leu Leu Leu Phe Leu Phe Glu Tyr Arg Ala Ala Lys Ile Leu																	
145				150				155								160	
Ile Met Glu Gln Phe Pro Glu Thr Ala Ala Ser Ile Val Ser Phe Lys																	
165				170				175									
Val Asp Ser Asp Val Val Ser Leu Asp Gly Arg Asp Phe Leu Glu Thr																	
180				185				190									
Asp Ala Glu Val Gly Asp Asp Gly Lys Leu His Val Thr Val Arg Lys																	
195				200				205									
Ser Asn Ala Ser Arg Arg Ser Phe Met Met Thr Pro Arg Pro Ser Asn																	
210				215				220									
Leu Thr Gly Ala Glu Ile Tyr Ser Leu Ser Ser Ser Arg Asn Pro Thr																	
225				230				235								240	
Pro Arg Gly Ser Asn Phe Asn His Ala Asp Phe Phe Ser Met Met Gly																	
245				250				255									
Tyr Gln Pro Arg His Ser Asn Phe Thr Ala Asn Asp Leu Phe Ser Ser																	
260				265				270									
Arg Gly Pro Thr Pro Arg Pro Ser Asn Phe Glu Glu Pro Ser Met Pro																	
275				280				285									
Gln Ala Val Thr Val Ala Ser Pro Arg Phe Gly Phe Tyr Pro Ser Gln																	
290				295				300									
Thr Val Pro Ala Ser Tyr Pro Pro Pro Asn Pro Asp Phe Ser Ser Ala																	

305	310	315	320
Thr Lys Asn Leu Lys Asn Gln Ser Gln Asn Gln Asn Pro Asn Gln Ser			
325	330		335
Gln Ser Gln Asn Ser Gln Ala Pro Ala Lys Gly Ala His Asp Ala Lys			
340	345	350	
Glu Leu His Met Phe Val Trp Ser Ser Ser Ala Ser Pro Met Ser Glu			
355	360	365	
Asn Ala Gly Leu Asn Val Phe Ser Ser Thr Asp Leu Gly Thr Ser Glu			
370	375	380	
Gln Pro Asp Gln Gly Ala Lys Glu Ile Arg Met Leu Val Ala Asp Asn			
385	390	395	400
Asn Ala His Leu Arg Asn Gly Glu Ala Asn Asn Lys Gly Gly Leu Glu			
405	410	415	
Ala Val Leu Gly Val Glu Asp Phe Lys Phe Leu Val Asn Gly Glu Glu			
420	425	430	
Gln Val Gly Glu Glu Lys Glu Gly Leu Asn Asn Gly Leu Asn Lys Leu			
435	440	445	
Gly Ser Ser Ser Thr Val Glu Leu Gln Pro Lys Ala Thr Val Ala Gly			
450	455	460	
Glu Ala Ser Ala Gly Lys His Met Pro Pro Ala Asn Val Met Thr Arg			
465	470	475	480
Leu Ile Leu Ile Met Val Trp Arg Lys Leu Ile Arg Asn Pro Asn Thr			
485	490	495	
Tyr Ser Ser Leu Ile Gly Val Val Trp Ser Leu Val Ala Phe Arg Trp			
500	505	510	
His Val His Met Pro Lys Ile Ile Glu Lys Ser Ile Ser Ile Leu Ser			
515	520	525	
Asp Ala Gly Leu Gly Met Ala Met Phe Ser Leu Gly			
530	535	540	
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<211> 525			
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aatgatcacc ttaacagact tctaccatgt gatgactgca atggtgccac tctatgtggc 360			
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ggcatcaacc gttttgtggc actctttgca gtgcctcttc tctcctttca cttcatagcc 480			
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<211> 64
 <212> PRT
 <213> Glycine max

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 <222> (38)
 <223> Xaa = ANY AMINO ACID

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Met Ile Thr Leu Thr Asp Phe Tyr His Val Met Thr Ala Met Val Pro
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Leu Tyr Val Ala Met Ile Leu Ala Tyr Gly Ser Val Lys Trp Trp Lys
 20 25 30

Ile Phe Ser Pro Asp Xaa Cys Ser Gly Ile Asn Arg Phe Val Ala Leu
 35 40 45

Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ala Ser Asn Asn Pro
 50 55 60

<210> 29

<211> 2549

<212> DNA

<213> Glycine max

<400> 29

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 actgccccaa aaccacatgc tcttccacat ccctatataa aatctttca atttcataa 180
 tcatacatcat caccaccaac tccaaactcaa actctccaaa acctgcact tcaacccccc 240
 tatataattcc ttccctcact ctcttctgt tctatcatct ttctgagagg ctgttgaca 300
 cacaaaaaat gatcacctt acagactt accatgttat gactgcaatg gtgcactct 360
 atgtggccat gatactagcc tatggctcag tgaagtgggt gaagattttc tccctgatc 420
 aatgtctgg catcaaccgt tttgtggcac tctttgcagt gcctcttctc tccttccact 480
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 tggaatgggc cataacccctt ttctctctc ccaccctccc aaacactttt gttatggca 660
 tccctttgtt caaaggatg tatgggtact tctcaggagg cctcatgggt caaattgtgg 720
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 tggaaatttcc cacagcagct tttgcccattt gttgagatt ctttacaggt ccagctgtca 1920
 tggcagctgc ttccatttgc gttggactca aagggttctt ctttacacgtt gccattgttc 1980

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tgtactacat ctgtttgggg ttgtgaatga aagaaatgat ggatgataca gaagattcac 2160
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<211> 605

<212> PRT

<213> Glycine max

<400> 30

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Leu Tyr Val Ala Met Ile Leu Ala Tyr Gly Ser Val Lys Trp Trp Lys
20 25 30

Ile Phe Ser Pro Asp Gln Cys Ser Gly Ile Asn Arg Phe Val Ala Leu
35 40 45

Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ala Ser Asn Asn Pro
50 55 60

Tyr Glu Met Asn Leu Arg Phe Leu Ala Ala Asp Thr Leu Gln Lys Ile
 65 70 75 80

Ile Ile Leu Val Leu Leu Ala Val Trp Ser Asn Ile Thr Lys Arg Gly
85 90 95

Cys Leu Glu Trp Ala Ile Thr Leu Phe Ser Leu Ser Thr Leu Pro Asn
 100 105 110

Thr Leu Val Met Gly Ile Pro Leu Leu Lys Gly Met Tyr Gly Asp Phe
115 120 125

Ser Gly Ser Leu Met Val Gln Ile Val Val Leu Gln Cys Ile Ile Trp
130 135 140

Tyr Thr Leu Met Leu Phe Leu Phe Glu Phe Arg Gly Ala Arg Met Leu
145 150 155 160

Ile Ser Glu Gln Phe Pro Asp Thr Ala Ala Ser Ile Val Ser Ile His
165 170 175

Val Asp Ser Asp Val Met Ser Leu Asp Gly Arg Gln Pro Leu Glu Thr
180 185 190

Glu Ala Glu Ile Lys Glu Asp Gly Lys Leu His Val Thr Val Arg Lys
195 200 205

Ser Asn Ala Ser Arg Ser Asp Ile Phe Ser Arg Arg Ser Gln Gly Leu
210 215 220

Ser Ser Thr Thr Pro Arg Pro Ser Asn Leu Thr Asn Ala Glu Ile Tyr
225 230 235 240

2000894 102502

Ser Leu Gln Ser Ser Arg Asn Pro Thr Pro Arg Gly Ser Ser Phe Asn
245 250 255

His Thr Asp Phe Tyr Ser Met Met Ala Ala Gly Gly Arg Asn Ser Asn
260 265 270

Phe Gly Ala Ser Asp Val Tyr Gly Leu Ser Ala Ser Arg Gly Pro Thr
275 280 285

Pro Arg Pro Ser Asn Tyr Asp Glu Asp Gly Gly Lys Pro Lys Phe His
290 295 300

Tyr His Ala Ala Gly Gly Thr Gly His Tyr Pro Ala Pro Asn Pro Gly
305 310 315 320

Met Phe Ser Pro Ser Asn Gly Ser Lys Ser Val Ala Ala Asn Ala Asn
325 330 335

Ala Lys Arg Pro Asn Gly Gln Ala Gln Leu Lys Pro Glu Asp Gly Asn
340 345 350

Arg Asp Leu His Met Phe Val Trp Ser Ser Ser Ala Ser Pro Val Ser
355 360 365

Asp Val Phe Gly Ala His Glu Tyr Gly Gly His Asp Gln Lys Glu
370 375 380

Val Lys Leu Asn Val Ser Pro Gly Lys Val Glu Asn Asn His Arg Asp
385 390 395 400

Thr Gln Glu Asp Tyr Leu Glu Lys Asp Glu Phe Ser Phe Gly Asn Arg
405 410 415

Glu Met Asp Arg Glu Met Asn Gln Leu Glu Gly Glu Lys Val Gly Asp
420 425 430

Gly Lys Pro Lys Thr Met Pro Pro Ala Ser Val Met Thr Arg Leu Ile
435 440 445

Leu Ile Met Val Trp Arg Lys Leu Ile Arg Asn Pro Asn Thr Tyr Ser
450 455 460

Ser Leu Ile Gly Leu Thr Trp Ser Leu Val Ser Phe Lys Trp Asn Val
465 470 475 480

Glu Met Pro Ala Ile Ile Ala Lys Ser Ile Ser Ile Leu Ser Asp Ala
485 490 495

Gly Leu Gly Met Ala Met Phe Ser Leu Gly Leu Phe Met Ala Leu Gln
500 505 510

Pro Arg Val Ile Ala Cys Gly Asn Ser Thr Ala Ala Phe Ala Met Ala
515 520 525

Val Arg Phe Leu Thr Gly Pro Ala Val Met Ala Ala Ser Ile Ala
530 535 540

Val Gly Leu Lys Gly Val Leu Leu His Val Ala Ile Val Gln Ala Ala
545 550 555 560

Leu Pro Gln Gly Ile Val Pro Phe Val Phe Ala Lys Glu Tyr Asn Val
 565 570 575

His Pro Asp Ile Leu Ser Thr Ala Val Ile Phe Gly Met Leu Ile Ala
 580 585 590

Leu Pro Ile Thr Leu Val Tyr Tyr Ile Leu Leu Gly Leu
 595 600 605

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 <211> 419
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 <213> Glycine max

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 <222> (237)
 <223> n=a,c,g or t

<220>
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 <222> (250)
 <223> n=a,c,g or t

<220>
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 <222> (347)
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 ctacattgac ctagcttagct acaaaccctg cattaaccat gatcaactggt aaggatattt 180
 atgatgtttt cgccgctatt gtgcctct acgttgcatt gatattaaggc atacggntca 240
 gttcgggtgn gaaaaatttt cacacctgat caatgttctg gcataaaccg cttcgttgct 300
 gtgttcgcag ttccacttct ttctttccac ttcatctcct ccaatgnccc ttatgctatg 360
 aactaccact tcatagcagc tgattgtctt caaaaagttg tcattttggg gggctcccc 419

<210> 32
 <211> 84
 <212> PRT
 <213> Glycine max

<220>
 <221> UNSURE
 <222> (25)
 <223> Xaa = ANY AMINO ACID

<220>
 <221> UNSURE
 <222> (32)
 <223> Xaa = ANY AMINO ACID

<220>
 <221> UNSURE
 <222> (64)
 <223> Xaa = ANY AMINO ACID

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Leu Tyr Val Ala Met Ile Leu Ser Xaa Tyr Gly Ser Val Arg Trp Xaa
20 25 30

Lys Ile Phe Thr Pro Asp Gln Cys Ser Gly Ile Asn Arg Phe Val Ala
35 40 45

Val Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ser Ser Asn Xaa
50 55 60

Pro Tyr Ala Met Asn Tyr His Phe Ile Ala Ala Asp Cys Leu Gln Lys
65 70 75 80

Val Val Ile Leu

<210> 33
<211> 2324
<212> DNA
<213> Glycine ma

<400> 33
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tttctgtcta cattgaccta gctagctaca aaccctgcat taaccatgat cactggtaaag 180
gatattttatg atgtttcgc ggctattgtg cccctctacg ttgctatgat attagcatac 240
ggctcagttc ggtgggtggaa aattttcaca cctgatcaat gttctggcat aaaccgcttc 300
gttgctgtgt tcgcagttcc acttctttct ttccacttca tctcctccaa tgacccttat 360
gctatgaact accacttcat agcagctgat tgcattttcaaa aagtgtcat ttgggtgtct 420
ctctttctat ggaacacccctt cacaacacat gtagccttag actggacaat cacccttcc 480
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agtgtctgtg gtggcccca gaagaaagat agcagttggg gcgggtgtgc ttagcacct 1260
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cccataacca tactctacta cgtgctgctt ggagtttaat ttgtcttggg agacaaaagc 2100
aatagaaaaaa gaagtatatg ttgctataac tgcgtact atgtaaaccc aatgtcacgc 2160
ccaagcgggg tggatgaagg gaaatgtaga agatattgga ttttagatgt tagagggaaa 2220
gagaaatttat atatagtata cggtagaatg ctatataataat taatttattta tgattcatat 2280
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 <211> 637
 <212> PRT
 <213> Glycine max

<400> 34
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 Ile Phe Thr Pro Asp Gln Cys Ser Gly Ile Asn Arg Phe Val Ala Val
 35 40 45
 Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ser Ser Asn Asp Pro
 50 55 60
 Tyr Ala Met Asn Tyr His Phe Ile Ala Ala Asp Cys Leu Gln Lys Val
 65 70 75 80
 Val Ile Leu Gly Ala Leu Phe Leu Trp Asn Thr Phe Thr Lys His Gly
 85 90 95
 Ser Leu Asp Trp Thr Ile Thr Leu Phe Ser Leu Ser Thr Leu Pro Asn
 100 105 110
 Thr Leu Val Met Gly Ile Pro Leu Leu Lys Ala Met Tyr Gly Asp Phe
 115 120 125
 Ser Gly Ser Leu Met Val Gln Ile Val Val Leu Gln Ser Val Ile Trp
 130 135 140
 Tyr Thr Leu Met Leu Phe Met Phe Glu Tyr Arg Gly Ala Lys Leu Leu
 145 150 155 160
 Ile Thr Glu Gln Phe Pro Glu Thr Ala Gly Ser Ile Thr Ser Phe Arg
 165 170 175
 Val Asp Ser Asp Val Val Ser Leu Asn Gly Arg Glu Pro Leu Gln Thr
 180 185 190
 Asp Ala Glu Ile Gly Glu Asp Gly Lys Leu His Val Val Val Lys Arg
 195 200 205
 Ser Ala Ala Ser Ser Met Ile Ser Ser Phe Asn Lys Ser His Leu Thr
 210 215 220
 Ser Met Thr Pro Arg Ala Ser Asn Leu Thr Gly Val Glu Ile Tyr Ser
 225 230 235 240
 Val Gln Ser Ser Arg Glu Pro Thr Pro Arg Gly Ser Ser Phe Asn Gln
 245 250 255
 Thr Asp Phe Tyr Ala Met Phe Ala Ser Lys Ala Pro Ser Pro Lys His
 260 265 270
 Gly Tyr Thr Asn Ser Phe Gln Ser Asn Asn Gly Gly Ile Gly Asp Val
 275 280 285

Tyr Ser Leu Gln Ser Ser Lys Gly Ala Thr Pro Arg Thr Ser Asn Phe
 290 295 300
 Glu Glu Glu Met Leu Lys Met His Lys Lys Arg Gly Gly Arg Ser Met
 305 310 315 320
 Ser Gly Glu Leu Phe Asn Gly Gly Leu Val Ser Ser Asn Tyr Pro Pro
 325 330 335
 Pro Asn Pro Met Phe Ser Gly Ser Thr Ser Ala Ala Gly Gly Pro Lys
 340 345 350
 Lys Lys Asp Ser Ser Gly Gly Gly Ala Val Ala Pro Asn Lys Glu
 355 360 365
 Leu His Met Phe Val Trp Ser Ser Ser Ala Ser Pro Val Ser Glu Gly
 370 375 380
 Asn Leu Arg His Ala Val Asn Arg Ala Ala Ser Thr Asp Phe Gly Thr
 385 390 395 400
 Val Asp Pro Ser Lys Ala Val Pro His Glu Thr Val Ala Ser Lys Ala
 405 410 415
 Val His Glu Leu Ile Glu Asn Met Ser Pro Gly Arg Arg Gly Ser Gly
 420 425 430
 Glu Arg Glu Pro Glu Met Asp Glu Gly Ala Lys Ile Pro Ala Ser Gly
 435 440 445
 Ser Pro Tyr Thr Cys Gln Lys Lys Val Asp Met Glu Asp Gly Asn Ala
 450 455 460
 Asn Lys Asn Gln Gln Met Pro Pro Ala Ser Val Met Thr Arg Leu Ile
 465 470 475 480
 Leu Ile Met Val Trp Arg Lys Leu Ile Arg Asn Pro Asn Thr Tyr Ser
 485 490 495
 Ser Leu Leu Gly Leu Thr Trp Ser Leu Ile Ser Phe Arg Trp His Ile
 500 505 510
 Glu Met Pro Thr Ile Val Lys Gly Ser Ile Ser Ile Leu Ser Asp Ala
 515 520 525
 Gly Leu Gly Met Ala Met Phe Ser Leu Gly Leu Phe Met Ala Leu Gln
 530 535 540
 Pro Lys Ile Ile Ala Cys Gly Lys Ser Val Ala Ala Phe Ser Met Ala
 545 550 555 560
 Val Arg Phe Leu Thr Gly Pro Ala Val Ile Ala Ala Thr Ser Ile Gly
 565 570 575
 Ile Gly Leu Arg Gly Val Leu Leu His Val Ala Ile Val Gln Ala Ala
 580 585 590
 Leu Pro Gln Gly Ile Val Pro Phe Val Phe Ala Lys Glu Tyr Asn Leu
 595 600 605
 His Ala Asp Ile Leu Ser Thr Ala Val Ile Phe Gly Met Leu Ile Ala

610

615

620

Leu Pro Ile Thr Ile Leu Tyr Tyr Val Leu Leu Gly Val
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<210> 35
<211> 473
<212> DNA
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 gncatgttca tggcgtaacgg gtcgggtgcgg tgggtggca tcttcacgccc ggaccantgc 180
 tcgggcatca aacgcttcgt ngccgttcc gcgggtggcgc tcctctcctt ccacttcatc 240
 tccaccaacg aaccctacgc catggactaa cgcttcctgg gcggccgactc gctgcanaan 300
 ntcgttatcc tcgccgnct cggccgtgtgg ganaangtgc tctccncca acggtgcccn 360
 ggggganaga aggccggcgaa ggctcctcnc tgggctggga caacanactc ttctccttgg 420
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 <211> 89
 <212> PRT
 <213> *Triticum aestivum*

<220>
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 <222> (10)
 <223> Xaa = ANY AMINO ACID

<220>
 <221> UNSURE
 <222> (12)..(13)
 <223> Xaa = ANY AMINO ACID

<220>
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 <222> (20)
 <223> Xaa = ANY AMINO ACID

<220>
 <221> UNSURE
 <222> (38)
 <223> Xaa = ANY AMINO ACID

<220>
 <221> UNSURE
 <222> (69)
 <223> Xaa = ANY AMINO ACID

<220>
 <221> UNSURE
 <222> (78)..(79)..(80)
 <223> Xaa = ANY AMINO ACID

<220>
 <221> UNSURE
 <222> (85)
 <223> Xaa = ANY AMINO ACID

<400> 36
 Met Ile Thr Gly Lys Asp Ile Tyr His Xaa Leu Xaa Xaa Val Val Val Pro
 1 5 10 15

Leu Tyr Val Xaa Met Phe Met Ala Tyr Gly Ser Val Arg Trp Trp Gly
 20 25 30

Ile Phe Thr Pro Asp Xaa Cys Ser Gly Ile Lys Arg Phe Val Ala Val
 35 40 45

Phe Ala Val Ala Leu Leu Ser Phe His Phe Ile Ser Thr Asn Glu Pro
 50 55 60

Tyr Ala Met Asp Xaa Arg Phe Leu Gly Ala Asp Ser Leu Xaa Xaa Xaa
 65 70 75 80

Val Ile Leu Ala Xaa Leu Ala Val Trp
 85

<210> 37

<211> 2293

<212> DNA

<213> *Triticum aestivum*

<400> 37

ctggatcgat ccccagcagc agagacgaga tcccacgagg aaccgttggg atcttagctag 60
 ctagctcgta gcgtatgtca ccggaaagga catctacgac gtgctggcg cggtggtgcc 120
 gctgtacgtg gccatgttca tggcgtaacgg gtccgtgcgg tgggtgggca tcttcacgac 180
 ggaccagtgc tcggcatca accgcttcgt cgccgtctc gcgggtccgc tcctctcctt 240
 ccacttcatac tccaccaacg acccctacgc catggactac cgcttcctgg ccggcactc 300
 gctgcagaag ctcgtcatcc tcgcccgcct cgccgtgtgg cacaacgtgc tctccgccta 360
 ccggtgccgc ggcggcacgg aggccggcga ggctctgtcg ctggacttgg aacatcacgt 420
 cttctccctg gcgacgctgc ccaacacgt ggtgatgggc atcccgtgc tgccgcgcatt 480
 gtacggcgac ttctcggggt cgctcatgtt gcagatcggt gtgctgcaga ggtcatctg 540
 gtacacgctc atgctttcc tcttcagata ccgcggcgcc aaggcgctca tctccgagca 600
 gttcccgccc gacgtcggcg ccagcatcg ctcttcgcg gtgcacttgc acgtcgctc 660
 gtcacacggg cgccggcgc tgacacgcga cgccggaggc ggccgcgacg gcccgttcca 720
 cgctcgatcc cgccggcgtcg cgccgggttc caccacgggc ggccacggcg ccggcgctc 780
 cgggatctac cgtggcgcgt ccaacgcatt gacgcggcgc gcgttcaacc tcacggcggt 840
 ggagatctac tcgctgcaga cgtcgggaa gcccacgcgg aggcaagtcca gttcaacca 900
 gtccgacttc tactccatgt tcaacgggag caagctgggt agtcccaagg gccaggcccc 960
 cgtcggcgggaa ggtgggtggg cgcggggca gggctcgac gacgggtgg ccaacaagtt 1020
 caagggcgcc gaggcggtcg cgccttaccc cgcggccaa cccggatgt tgatgcggc 1080
 gccacggaaag aaggagatgggggttccaa ctcaaactcg aacaaggagc tgacatgtt 1140
 cgtgtggagc tccacgcgt cgcccggtgc ggaggccaaat ctcgcacca cggtcaacca 1200
 cgccgcgtcc accgacttcg cgcggcgcacc gcccggcgca gccacggccac gagacggcgc 1260
 cacacccaga ggcgtgagcg gcagcgtgac gcccgtgtat aagaaggacg ccacggcgg 1320
 cgcgggtggag gtggagatcg aggacggcat gataagagc ccggcgacgg ggctggcg 1380
 caagttcccg gtgtcggtt cccctacgt ggccccggg aagaaggcg ccgacgtgcc 1440
 tggctggag gaggcgccgc acccgatgcc gcccggcgcgt gtatgacccc ggctcatct 1500
 catcatgtt tggcgcaacg tcatccgaa ccccaacacc tactccagcc tcatcggtt 1560
 cgtctggta ctcgtcttct tcagggtgaa cattcagatg cctacaataa tcaaggggtc 1620
 catatccatc ctgtctgtat cagggtctagg gatggctatg ttcatgttgcgt gtctcttcat 1680
 ggctctgcaaa ccaaagatca tctcttgccg gaagtctgtc gccacattt caatggcagt 1740
 gaggttcttg actggggccgg cgggtatcgcc cgccacctca atcggcgatc ggctccgggg 1800
 agtgcctta catgttgcctt tttccaggc agcaacttca caaggaattt ttccattttgt 1860
 gttcgccaag gactacaatt gccatccatca aataacttagc acagcggtta ttttggat 1920
 gctcgccgc ctcccgatca cgataactcta ctacgttctc ttggatgtt agattcataa 1980
 tcttgaagaa ccaaggctgc aaatcttccg gttagggagaa gttagaattt agagagaaaa 2040
 tggcaactga acatgttgcgtt gggctgttctt gaagacctga agatgcatga gaccaagcag 2100
 aaggataggg agaactaagt aggacccctag acaggaattt aaaggacaga taaagatatc 2160
 cttggttcca tttttttaat tttttatatt attttacta ctgttttaga tccaaagtaa 2220
 aggcttagggc tttgagatcg aagagttca ccgttaatc gaaaaaaaaaaaaaaaaaaaa 2280
 aaaaaaaaaaaa aaa 2293

<210> 38

<211> 632

<212> PRT

<213> *Triticum aestivum*

<400> 38

Met Ile Thr Gly Lys Asp Ile Tyr Asp Val Leu Ala Ala Val Val Pro
 1 5 10 15

Leu Tyr Val Ala Met Phe Met Ala Tyr Gly Ser Val Arg Trp Trp Gly
 20 25 30
 Ile Phe Thr Pro Asp Gln Cys Ser Gly Ile Asn Arg Phe Val Ala Val
 35 40 45
 Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ser Thr Asn Asp Pro
 50 55 60
 Tyr Ala Met Asp Tyr Arg Phe Leu Ala Ala Asp Ser Leu Gln Lys Leu
 65 70 75 80
 Val Ile Leu Ala Ala Leu Ala Val Trp His Asn Val Leu Ser Arg Tyr
 85 90 95
 Arg Cys Arg Gly Gly Thr Glu Ala Gly Glu Ala Ser Ser Leu Asp Trp
 100 105 110
 Thr Ile Thr Leu Phe Ser Leu Ala Thr Leu Pro Asn Thr Leu Val Met
 115 120 125
 Gly Ile Pro Leu Leu Arg Ala Met Tyr Gly Asp Phe Ser Gly Ser Leu
 130 135 140
 Met Val Gln Ile Val Val Leu Gln Ser Val Ile Trp Tyr Thr Leu Met
 145 150 155 160
 Leu Phe Leu Phe Glu Tyr Arg Gly Ala Lys Ala Leu Ile Ser Glu Gln
 165 170 175
 Phe Pro Pro Asp Val Gly Ala Ser Ile Ala Ser Phe Arg Val Asp Ser
 180 185 190
 Asp Val Val Ser Leu Asn Gly Arg Glu Ala Leu His Ala Asp Ala Glu
 195 200 205
 Val Gly Arg Asp Gly Arg Val His Val Val Ile Arg Arg Ser Ala Ser
 210 215 220
 Gly Ser Thr Thr Gly Gly His Gly Ala Gly Arg Ser Gly Ile Tyr Arg
 225 230 235 240
 Gly Ala Ser Asn Ala Met Thr Pro Arg Ala Ser Asn Leu Thr Gly Val
 245 250 255
 Glu Ile Tyr Ser Leu Gln Thr Ser Arg Glu Pro Thr Pro Arg Gln Ser
 260 265 270
 Ser Phe Asn Gln Ser Asp Phe Tyr Ser Met Phe Asn Gly Ser Lys Leu
 275 280 285
 Ala Ser Pro Lys Gly Gln Pro Pro Val Ala Gly Gly Gly Ala Arg
 290 295 300
 Gly Gln Gly Leu Asp Glu Gln Val Ala Asn Lys Phe Lys Gly Gly Glu
 305 310 315 320
 Ala Ala Ala Pro Tyr Pro Ala Pro Asn Pro Gly Met Met Met Pro Ala
 325 330 335
 Pro Arg Lys Lys Glu Leu Gly Gly Ser Asn Ser Asn Ser Asp Lys Glu

340

345

350

Leu His Met Phe Val Trp Ser Ser Ser Ala Ser Pro Val Ser Glu Ala
 355 360 365

Asn Leu Arg Asn Ala Val Asn His Ala Ala Ser Thr Asp Phe Ala Ala
 370 375 380

Ala Pro Pro Ala Ala Ala Thr Pro Arg Asp Gly Ala Thr Pro Arg Gly
 385 390 395 400

Val Ser Gly Ser Val Thr Pro Val Met Lys Lys Asp Ala Ser Ser Gly
 405 410 415

Ala Val Glu Val Glu Ile Glu Asp Gly Met Met Lys Ser Pro Ala Thr
 420 425 430

Gly Leu Gly Ala Lys Phe Pro Val Ser Gly Ser Pro Tyr Val Ala Pro
 435 440 445

Arg Lys Lys Gly Ala Asp Val Pro Gly Leu Glu Glu Ala Ala His Pro
 450 455 460

Met Pro Pro Ala Ser Val Met Thr Arg Leu Ile Leu Ile Met Val Trp
 465 470 475 480

Arg Lys Leu Ile Arg Asn Pro Asn Thr Tyr Ser Ser Leu Ile Gly Leu
 485 490 495

Val Trp Ser Leu Val Ser Phe Arg Trp Asn Ile Gln Met Pro Thr Ile
 500 505 510

Ile Lys Gly Ser Ile Ser Ile Leu Ser Asp Ala Gly Leu Gly Met Ala
 515 520 525

Met Phe Ser Leu Gly Leu Phe Met Ala Leu Gln Pro Lys Ile Ile Ser
 530 535 540

Cys Gly Lys Ser Val Ala Thr Phe Ala Met Ala Val Arg Phe Leu Thr
 545 550 555 560

Gly Pro Ala Val Ile Ala Ala Thr Ser Ile Ala Val Gly Leu Arg Gly
 565 570 575

Val Leu Leu His Val Ala Ile Val Gln Ala Ala Leu Pro Gln Gly Ile
 580 585 590

Val Pro Phe Val Phe Ala Lys Glu Tyr Asn Cys His Pro Gln Ile Leu
 595 600 605

Ser Thr Ala Val Ile Phe Gly Met Leu Val Ala Leu Pro Ile Thr Ile
 610 615 620

Leu Tyr Tyr Val Leu Leu Gly Ile
 625 630

<210> 39

<211> 447

<212> DNA

<213> Triticum aestivum

<220>
<221> unsure
<222> (366)
<223> n=a,c,g or t

<220>
<221> unsure
<222> (380)
<223> n=a,c,g or t

<220>
<221> unsure
<222> (390)
<223> n=a,c,g or t

<220>
<221> unsure
<222> (418)
<223> n=a,c,g or t

<220>
<221> unsure
<222> (421)
<223> n=a,c,g or t

<220>
<221> unsure
<222> (434)
<223> n=a,c,g or t

<400> 39
gcacacagag acagtcatac tactccatca aataagatga tagcgttggg cgacatctac 60
aagggtgtgg aggcgatggc gccgcttac ttccgcctag ggctcggtt cgggtccgtt 120
cgatggtggc gtttcttac ggcggagcag tgccgcgcca tcaacacgct ggtggtctgc 180
ttctccatgc ctttcttac ctccgacttc gtgtccgcg ccgacccta cgccatgaat 240
taccgcgtca tcgcccgcga cgccgtcgcc aaacttctcg ccgtgctcgc cgccgcgtc 300
tgggcgcgtc ggcacaaggc caaggccgc gcctactcgt ggtcatcagc gggttctccc 360
tgggcncgtc caacaacacn ctgcgtctn gggtgccgt tctgggacgc caatttcngg 420
naattggggg gcanggactt tattttt 447

<210> 40
<211> 94
<212> PRT
<213> Triticum aestivum

<400> 40
Met Ile Ala Leu Gly Asp Ile Tyr Lys Val Val Glu Ala Met Ala Pro
1 5 10 15

Leu Tyr Phe Ala Leu Gly Leu Gly Tyr Gly Ser Val Arg Trp Trp Arg
20 25 30

Phe Phe Thr Ala Glu Gln Cys Gly Ala Ile Asn Thr Leu Val Val Cys
35 40 45

Phe Ser Met Pro Phe Phe Thr Phe Asp Phe Val Val Arg Ala Asp Pro
50 55 60

Tyr Ala Met Asn Tyr Arg Val Ile Ala Ala Asp Ala Val Ala Lys Leu
65 70 75 80

Leu Ala Val Leu Ala Ala Ala Val Trp Ala Arg Cys Ala Lys
85 90

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<210> 41
<211> 415
<212> DNA
<213> Triticum aestivum
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<400> 41
ctgcgcctaaa taaacctctc cccccacgcac tcccccaactc caccacacac cctcaccagc 60
tcgcccgcag agtgagccga ggccgagagc cggagcgcga gaggaagaag cagaggaggt 120
cgggcaagat gatcacgggc acggacttct accacgtat gacggcggtg gtgccgtgt 180
acgtggccat gatcctcgcc tacggctccg tcaagtgggt gggcatcttc acgcccggacc 240
agtgctccgg gatcaaccgc ttcgtcgccg tcttcgcctg gccgctccctc tccttccact 300
tcatctccac caacaacccc tacaccatga acctgcgcctt catcgccgccc gacacgctgc 360
agaagctcat gatgctcgcc atgctcaacg cctggagcaa ctctcccgcc gcgcc 415
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<210> 42
<211> 91
<212> PRT
<213> *Triticum aestivum*

<400> 42
Met Ile Thr Gly Thr Asp Phe Tyr His Val Met Thr Ala Val Val Pro
1 5 10 15

Leu Tyr Val Ala Met Ile Leu Ala Tyr Gly Ser Val Lys Trp Trp Gly
20 25 30

Ile Phe Thr Pro Asp Gln Cys Ser Gly Ile Asn Arg Phe Val Ala Leu
35 40 45

Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ser Thr Asn Asn Pro
50 55 60

Tyr Thr Met Asn Leu Arg Phe Ile Ala Ala Asp Thr Leu Gln Lys Leu
65 70 75 80

Met Met Leu Ala Met Leu Asn Ala Trp Ser Asn
85 90

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<210> 43
<211> 647
<212> PRT
<213> Arabidopsis thaliana
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<400> 43
Met Ile Thr Gly Lys Asp Met Tyr Asp Val Leu Ala Ala Met Val Pro
1 5 10 15

Leu Tyr Val Ala Met Ile Leu Ala Tyr Gly Ser Val Arg Trp Trp Gly
20 25 30

Ile Phe Thr Pro Asp Gln Cys Ser Gly Ile Asn Arg Phe Val Ala Val
35 40 45

Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ser Ser Asn Asp Pro
50 55 60

Tyr Ala Met Asn Tyr His Phe Leu Ala Ala Asp Ser Leu Gln Lys Val
65 70 75 80

Val Ile Leu Ala Ala Leu Phe Leu Trp Gln Ala Phe Ser Arg Arg Gly
85 90 95

Ser Leu Glu Trp Met Ile Thr Leu Phe Ser Leu Ser Thr Leu Pro Asn
100 105 110

Thr Leu Val Met Gly Ile Pro Leu Leu Arg Ala Met Tyr Gly Asp Phe
115 120 125

Ser Gly Asn Leu Met Val Gln Ile Val Val Leu Gln Ser Ile Ile Trp
130 135 140

Tyr Thr Leu Met Leu Phe Leu Phe Glu Phe Arg Gly Ala Lys Leu Leu
145 150 155 160

Ile Ser Glu Gln Phe Pro Glu Thr Ala Gly Ser Ile Thr Ser Phe Arg
165 170 175

Val Asp Ser Asp Val Ile Ser Leu Asn Gly Arg Glu Pro Leu Gln Thr
180 185 190

Asp Ala Glu Ile Gly Asp Asp Gly Lys Leu His Val Val Val Arg Arg
195 200 205

Ser Ser Ala Ala Ser Ser Met Ile Ser Ser Phe Asn Lys Ser His Gly
210 215 220

Gly Gly Leu Asn Ser Ser Met Ile Thr Pro Arg Ala Ser Asn Leu Thr
225 230 235 240

Gly Val Glu Ile Tyr Ser Val Gln Ser Ser Arg Glu Pro Thr Pro Arg
245 250 255

Ala Ser Ser Phe Asn Gln Thr Asp Phe Tyr Ala Met Phe Asn Ala Ser
260 265 270

Lys Ala Pro Ser Pro Arg His Gly Tyr Thr Asn Ser Tyr Gly Gly Ala
275 280 285

Gly Ala Gly Pro Gly Gly Asp Val Tyr Ser Leu Gln Ser Ser Lys Gly
290 295 300

Val Thr Pro Arg Thr Ser Asn Phe Asp Glu Glu Val Met Lys Thr Ala
305 310 315 320

Lys Lys Ala Gly Arg Gly Arg Ser Met Ser Gly Glu Leu Tyr Asn
325 330 335

Asn Asn Ser Val Pro Ser Tyr Pro Pro Pro Asn Pro Met Phe Thr Gly
340 345 350

Ser Thr Ser Gly Ala Ser Gly Val Lys Lys Lys Glu Ser Gly Gly Gly
355 360 365

Gly Ser Gly Gly Val Gly Val Gly Gly Gln Asn Lys Glu Met Asn
370 375 380

Met Phe Val Trp Ser Ser Ser Ala Ser Pro Val Ser Glu Ala Asn Ala
385 390 395 400

Lys Asn Ala Met Thr Arg Gly Ser Ser Thr Asp Val Ser Thr Asp Pro
405 410 415

Lys Val Ser Ile Pro Pro His Asp Asn Leu Ala Thr Lys Ala Met Gln
 420 425 430

Asn Leu Ile Glu Asn Met Ser Pro Gly Arg Lys Gly His Val Glu Met
435 440 445

Asp Gln Asp Gly Asn Asn Gly Gly Lys Ser Pro Tyr Met Gly Lys Lys
450 455 460

Gly Ser Asp Val Glu Asp Gly Gly Pro Gly Pro Arg Lys Gln Gln Met
465 470 475 480

Pro Pro Ala Ser Val Met Thr Arg Leu Ile Leu Ile Met Val Trp Arg
485 490 495

Lys Leu Ile Arg Asn Pro Asn Thr Tyr Ser Ser Leu Phe Gly Leu Ala
500 505 510

Trp Ser Leu Val Ser Phe Lys Trp Asn Ile Lys Met Pro Thr Ile Met
515 520 525

Ser Gly Ser Ile Ser Ile Leu Ser Asp Ala Gly Leu Gly Met Ala Met
530 535 540

Phe Ser Leu Gly Leu Phe Met Ala Leu Gln Pro Lys Ile Ile Ala Cys
545 550 555 560

Gly Lys Ser Val Ala Gly Phe Ala Met Ala Val Arg Phe Leu Thr Gly
565 570 575

Pro Ala Val Ile Ala Ala Thr Ser Ile Ala Ile Gly Ile Arg Gly Asp
 580 585 590

Leu Leu His Ile Ala Ile Val Gln Ala Ala Leu Pro Gln Gly Ile Val
595 600 605

Pro Phe Val Phe Ala Lys Glu Tyr Asn Val His Pro Asp Ile Leu Ser
610 615 620

Thr Ala Val Ile Phe Gly Met Leu Val Ala Leu Pro Val Thr Val Leu
625 630 635 640

Tyr Tyr Val Leu Leu Gly Leu
645

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<210> 44
<211> 622
<212> PRT
<213> Arabidopsis thaliana
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<400> 44

Met Ile Thr

1

Met	Ile	Thr	Ala	Ala	Asp	Phe	Tyr	His	Val	Met	Thr	Ala	Met	Val	Pro
1				5					10					15	

Leu Tyr Val Ala Met Ile Leu Ala Tyr Gly Ser Val Lys Trp Trp Lys
20 25 30

Ile Phe Thr Pro Asp Gln Cys Ser Gly Ile Asn Arg Phe Val Ala Leu

35

40

45

Phe Ala Val Pro Leu Leu Ser	Phe His	Ile Ala Ala Asn Asn Pro	
50	55	60	
Tyr Ala Met Asn Leu Arg	Phe Leu Ala Ala Asp	Ser Leu Gln Lys Val	
65	70	75	80
Ile Val Leu Ser Leu Leu Phe	Leu Trp Cys Lys	Leu Ser Arg Asn Gly	
85	90	95	
Ser Leu Asp Trp Thr Ile Thr	Leu Phe Ser	Leu Ser Thr Leu Pro Asn	
100	105	110	
Thr Leu Val Met Gly	Ile Pro Leu Leu Lys	Gly Met Tyr Gly Asn Phe	
115	120	125	
Ser Gly Asp Leu Met Val Gln	Ile Val Val Leu Gln Cys	Ile Ile Trp	
130	135	140	
Tyr Ile Leu Met Leu Phe	Leu Phe Glu Tyr	Arg Gly Ala Lys Leu Leu	
145	150	155	160
Ile Ser Glu Gln Phe Pro Asp	Thr Ala Gly	Ser Ile Val Ser Ile His	
165	170	175	
Val Asp Ser Asp Ile Met Ser	Leu Asp Gly Arg	Gln Pro Leu Glu Thr	
180	185	190	
Glu Ala Glu Ile Lys Glu Asp	Gly Lys Leu His	Val Thr Val Arg Arg	
195	200	205	
Ser Asn Ala Ser Arg Ser Asp	Ile Tyr Ser Arg	Arg Ser Gln Gly Leu	
210	215	220	
Ser Ala Thr Pro Arg Pro	Ser Asn Leu Thr	Asn Ala Glu Ile Tyr Ser	
225	230	235	240
Leu Gln Ser Ser Arg Asn Pro	Thr Pro Arg	Gly Ser Ser Phe Asn His	
245	250	255	
Thr Asp Phe Tyr Ser Met Met	Ala Ser Gly	Gly Arg Asn Ser Asn	
260	265	270	
Phe Gly Pro Gly Glu Ala Val	Phe Gly Ser Lys	Gly Pro Thr Pro Arg	
275	280	285	
Pro Ser Asn Tyr Glu Glu Asp	Gly Pro Ala Lys	Pro Thr Ala Ala	
290	295	300	
Gly Thr Ala Ala Gly	Ala Gly Arg	Phe His Tyr Gln Ser Gly Gly Ser	
305	310	315	320
Gly Gly Gly Gly Ala His	Tyr Pro Ala Pro Asn	Pro Gly Met Phe	
325	330	335	
Ser Pro Asn Thr Gly Gly	Gly Thr Ala Ala Lys	Gly Asn Ala	
340	345	350	
Pro Val Val Gly Gly Lys	Arg Gln Asp Gly	Asn Gly Arg Asp Leu His	
355	360	365	

Met Phe Val Trp Ser Ser Ser Ala Ser Pro Val Ser Asp Val Phe Gly
 370 375 380

Gly Gly Gly Gly Asn His His Ala Asp Tyr Ser Thr Ala Thr Asn Asp
 385 390 395 400

His Gln Lys Asp Val Lys Ile Ser Val Pro Gln Gly Asn Ser Asn Asp
 405 410 415

Asn Gln Tyr Val Glu Arg Glu Glu Phe Ser Phe Gly Asn Lys Asp Asp
 420 425 430

Asp Ser Lys Val Leu Ala Thr Asp Gly Gly Asn Asn Ile Ser Asn Lys
 435 440 445

Thr Thr Gln Ala Lys Val Met Pro Pro Thr Ser Val Met Thr Arg Leu
 450 455 460

Ile Leu Ile Met Val Trp Arg Lys Leu Ile Arg Asn Pro Asn Ser Tyr
 465 470 475 480

Ser Ser Leu Phe Gly Ile Thr Trp Ser Leu Ile Ser Phe Lys Trp Asn
 485 490 495

Ile Glu Met Pro Ala Leu Ile Ala Lys Ser Ile Ser Ile Leu Ser Asp
 500 505 510

Ala Gly Leu Gly Met Ala Met Phe Ser Leu Gly Leu Phe Met Ala Leu
 515 520 525

Asn Pro Arg Ile Ile Ala Cys Gly Asn Arg Arg Ala Ala Phe Ala Ala
 530 535 540

Ala Met Arg Phe Val Val Gly Pro Ala Val Met Leu Val Ala Ser Tyr
 545 550 555 560

Ala Val Gly Leu Arg Gly Val Leu Leu His Val Ala Ile Ile Gln Ala
 565 570 575

Ala Leu Pro Gln Gly Ile Val Pro Phe Val Phe Ala Lys Glu Tyr Asn
 580 585 590

Val His Pro Asp Ile Leu Ser Thr Ala Val Ile Phe Gly Met Leu Ile
 595 600 605

Ala Leu Pro Ile Thr Leu Leu Tyr Tyr Ile Leu Leu Gly Leu
 610 615 620

<210> 45

<211> 425

<212> DNA

<213> Triticum aestivum

<400> 45

gcacgagctc gcctaaataa acctctcccc cacgcactcc cccactccac cacacaccct 60
 caccagctcg cccgcagagt gagccgaggc cgagagccgg agcgcgagag gaagaagcag 120
 aggaggctcg gcaagatgtat cacgggcacg gacttctacc acgtgatgac ggccgtgggtg 180
 ccgctgtacg tggccatgtat cctcgctac ggctccgtca agtggtgggg catcttcacg 240
 cgggaccagt gtcggggat caaccgcttc gtcgcgtct tcgcccgtgcc gctcctctcc 300
 ttccacttca tctccaccaa caaccctac accatgaacc tgcgcttcat cgccgcccac 360

acgctgcaga agctcatgat gctgccatg ctcaccgcct ggagccacct ctcccggc 420
ggcag 425

<210> 46
<211> 96
<212> PRT
<213> Triticum aestivum

<400> 46
Met Ile Thr Gly Thr Asp Phe Tyr His Val Met Thr Ala Val Val Pro
1 5 10 15

Leu Tyr Val Ala Met Ile Leu Ala Tyr Gly Ser Val Lys Trp Trp Gly
20 25 30

Ile Phe Thr Pro Asp Gln Cys Ser Gly Ile Asn Arg Phe Val Ala Leu
35 40 45

Phe Ala Val Pro Leu Leu Ser Phe His Phe Ile Ser Thr Asn Asn Pro
50 55 60

Tyr Thr Met Asn Leu Arg Phe Ile Ala Ala Asp Thr Leu Gln Lys Leu
65 70 75 80

Met Met Leu Ala Met Leu Thr Ala Trp Ser His Leu Ser Arg Arg Gly
85 90 95

<210> 47
<211> 855
<212> DNA
<213> Zea mays

<400> 47
ccacgcgtcc ggctgatcgt cctggcgctg ctcaactgcat ggagctaccc ctcccggc 60
ggctgcctcg agtggaccat cacgctttc tccctgtcga cgctgccaa cacgctggtg 120
atgggcattcc cgctgctcaa gggcatgtac ggcgacttct ccggcagcct catggtgca 180
atcggtgtgc tccagtgcat catctggtac acgctgatgc tggcatgtt cgagtaccgc 240
ggcgccaggaa tcctcatcac cgagcaggcc cccgacacgg cgggcggccat cgccatccatc 300
gtgggtggacc ccgacgtggt gtcgctggac gggcgcaacg acgccatcga gacggaggcc 360
gaggtgaagg aggacggcaa gatacacgtc accgtgcggc gctccaacgc gtcgcgctcg 420
gacatctact cccggcggtc catggggttc tccagcacca cgcccgccg cagcaacctg 480
accaacgccc agatctactc gctgcagtcg tcgaggaacc ccacgcccgg ggcgtccagc 540
ttcaaccaca cccgacttcta ctccatggtc ggccgcagct ccaacttcgc cgccggggac 600
gcgttcggcc tgcgcacggg cgccacgccc agggcgcca actacgagga ggacccggca 660
ggcaaggcgaa acaagtacgg ccagtacccg ggcggccaaacc cggccatggc ggcgcagccc 720
gccaaggggcc tcaagaaggc ggccaatggg caggccaaagg gcgaggacgg caaggaccta 780
cacatgttcg tgcggagctc cagcgcgtcg cccgtgtccg acgtgttcgg caatggcgcc 840
gccgagtaca acgac 855

<210> 48
<211> 285
<212> PRT
<213> Zea mays

<400> 48
Pro Arg Val Arg Leu Ile Val Leu Ala Leu Leu Thr Ala Trp Ser Tyr
1 5 10 15

Leu Ser Arg Arg Gly Cys Leu Glu Trp Thr Ile Thr Leu Phe Ser Leu
20 25 30

Ser Thr Leu Pro Asn Thr Leu Val Met Gly Ile Pro Leu Leu Lys Gly
35 40 45
Met Tyr Gly Asp Phe Ser Gly Ser Leu Met Val Gln Ile Val Val Leu
50 55 60
Gln Cys Ile Ile Trp Tyr Thr Leu Met Leu Phe Met Phe Glu Tyr Arg
65 70 75 80
Gly Ala Arg Ile Leu Ile Thr Glu Gln Phe Pro Asp Thr Ala Gly Ala
85 90 95
Ile Ala Ser Ile Val Val Asp Pro Asp Val Val Ser Leu Asp Gly Arg
100 105 110
Asn Asp Ala Ile Glu Thr Glu Ala Glu Val Lys Glu Asp Gly Lys Ile
115 120 125
His Val Thr Val Arg Arg Ser Asn Ala Ser Arg Ser Asp Ile Tyr Ser
130 135 140
Arg Arg Ser Met Gly Phe Ser Ser Thr Thr Pro Arg Pro Ser Asn Leu
145 150 155 160
Thr Asn Ala Glu Ile Tyr Ser Leu Gln Ser Ser Arg Asn Pro Thr Pro
165 170 175
Arg Gly Ser Ser Phe Asn His Thr Asp Phe Tyr Ser Met Val Gly Arg
180 185 190
Ser Ser Asn Phe Ala Ala Gly Asp Ala Phe Gly Leu Arg Thr Gly Ala
195 200 205
Thr Pro Arg Pro Ser Asn Tyr Glu Glu Asp Pro Gln Gly Lys Ala Asn
210 215 220
Lys Tyr Gly Gln Tyr Pro Ala Pro Asn Pro Ala Met Ala Ala Gln Pro
225 230 235 240
Ala Lys Gly Leu Lys Lys Ala Ala Asn Gly Gln Ala Lys Gly Glu Asp
245 250 255
Gly Lys Asp Leu His Met Phe Val Trp Ser Ser Ser Ala Ser Pro Val
260 265 270
Ser Asp Val Phe Gly Asn Gly Ala Ala Glu Tyr Asn Asp
275 280 285